MC0051
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Scottish Hospital Centre
INFORMATION SHEET

COMBINED EXAMINATION TREATMENT ROOM

Accident and Emergency Department

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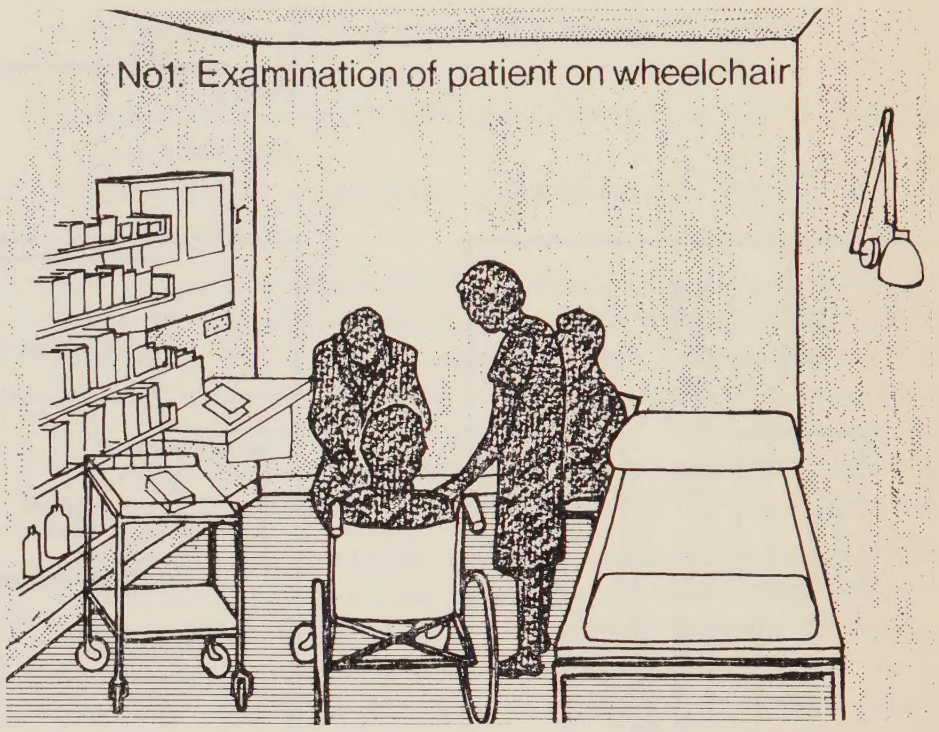
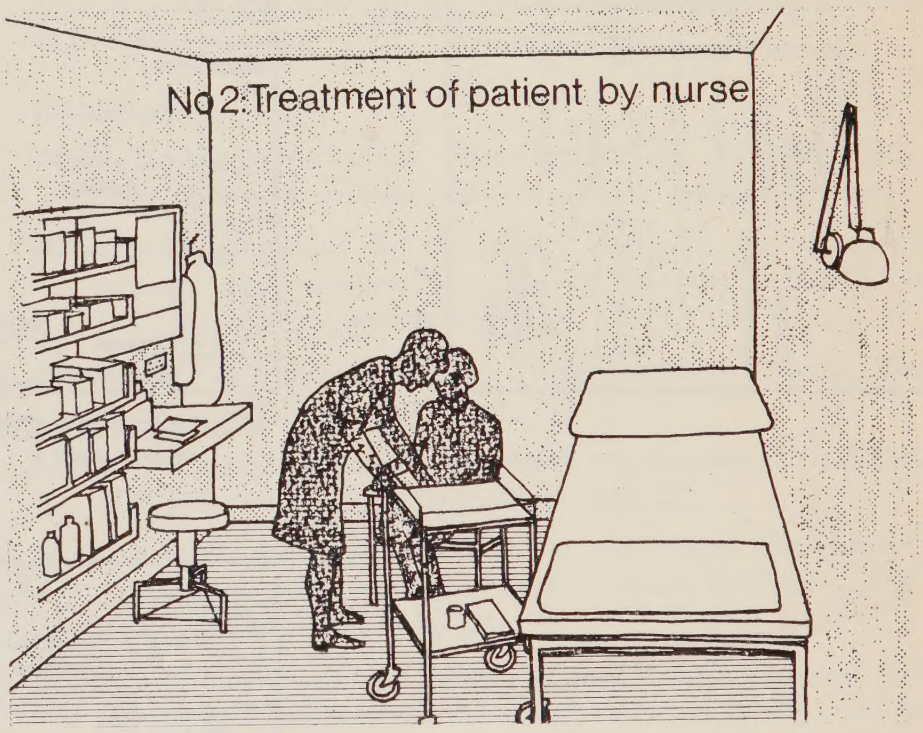
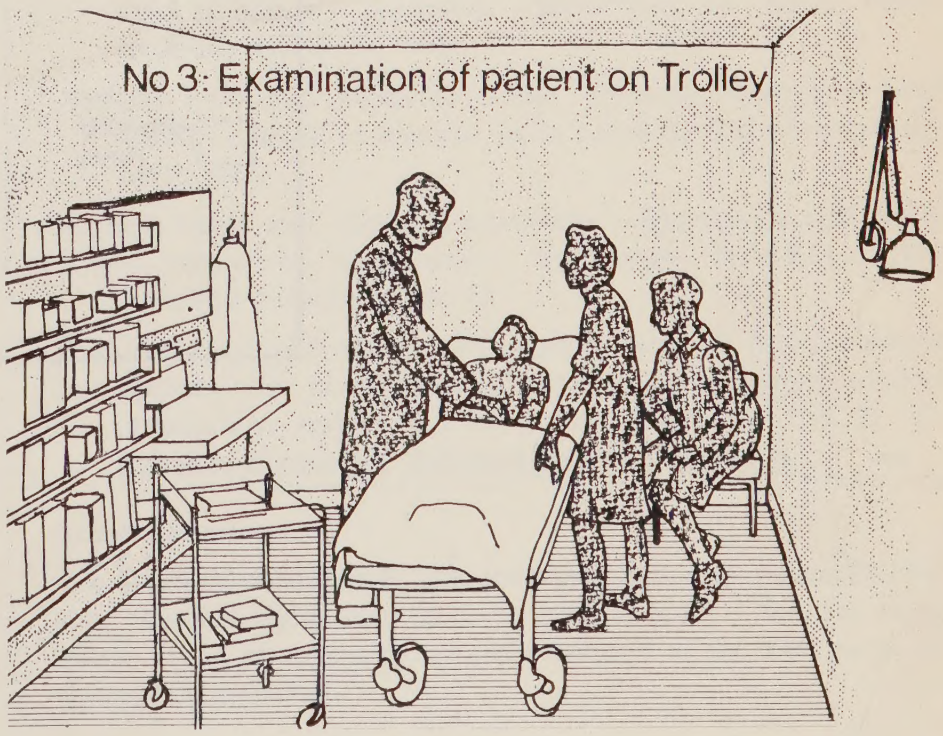






Introduction

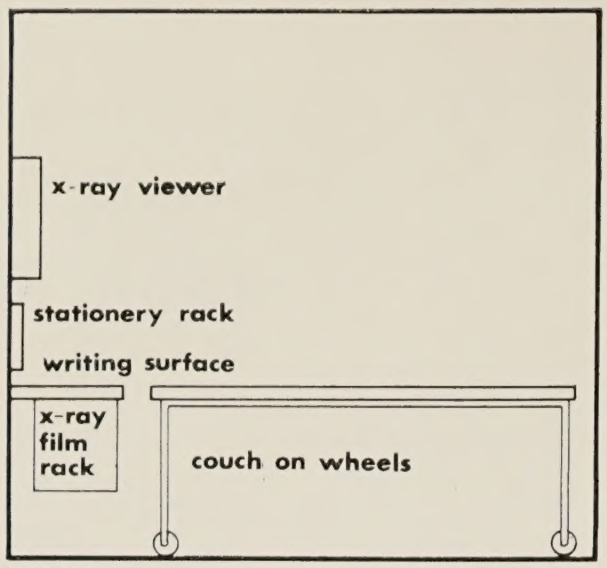
This information sheet presents design and layout recommendations for a combined examination and treatment room within the context of Scottish Home and Health Department Hospital Planning Note No. 3—Provision and Design of Casualty and Accident Departments. This Note recommends the provision of rooms which will be flexible in use and will cater in detail for the requirements of patients, companions and staff. Fragmentation of accommodation for different functions is considered undesirable and this multi-purpose room will be suitable for patients on a trolley, in a wheelchair or on foot. It is equipped for case history taking, examination, recording, viewing of X-Ray films and for selected treatment of patients by doctors and nurses; it is not planned for the administration of a general anaesthetic.

The study developed from the construction of a full-scale mock-up of the proposed design for such a room in the Accident and Emergency Department project at Falkirk Royal Infirmary. Visits were made to six major accident departments purpose built or upgraded within the last five years. Discussions were held with representative designers and users; the mock-up was further developed and the recommended layout and grouping of equipment finalised (Scheme A). A policy entailing a trolley exchange system resulted in an alternative plan and a second mock-up (Scheme B).

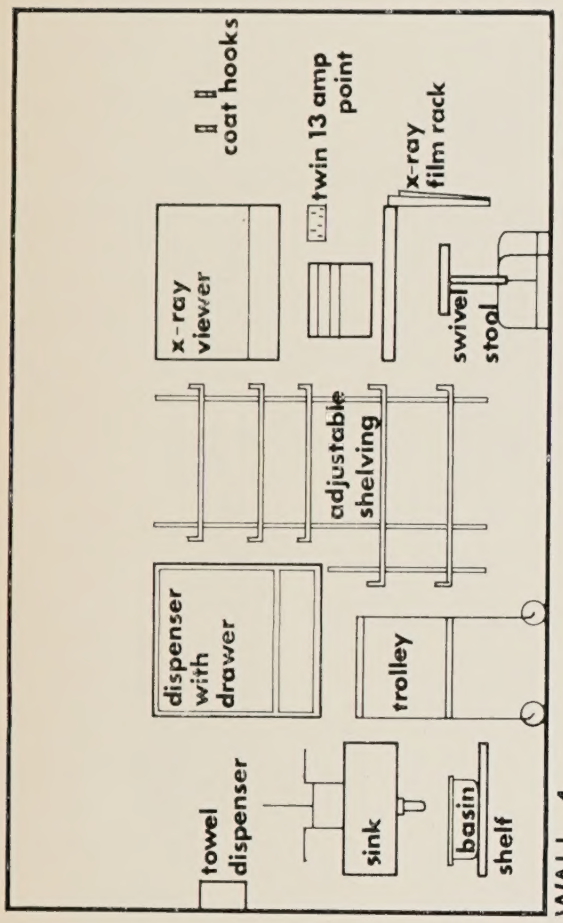
Guidance on the number of combined examination and treatment rooms required is given in Planning Note No. 3. This number, which might be as many as sixteen in a large Accident and Emergency Department, would relate to the load of patients for the peak three-hour period of the day.

When a patient arrives at the Accident and Emergency Department a decision is made on the need for resuscitation. For those in need of resuscitation, a room would be available with equipment ready for use. Where a number of seriously injured patients arrive at one time, theatre accommodation would be used. A general waiting area would be provided for patients with a separate waiting space for children and adult companions. In addition to combined examination and treatment rooms there would be operating theatre facilities and related accommodation, together with a short-stay ward. A plaster room would be available in which plasters would be applied to new patients with fractures, particularly those fractures requiring to be reduced under a general anaesthetic. In larger departments a treatment room would be provided. The X-Ray department should be conveniently located; otherwise separate facilities would be required within the Accident and Emergency Department.

STUDY TEAM—Architect: Miss E. T. PHILLIPS Medical Officer: Dr A. M. ANDERSON Nursing Officer: Miss E. A. REID



WALL 1



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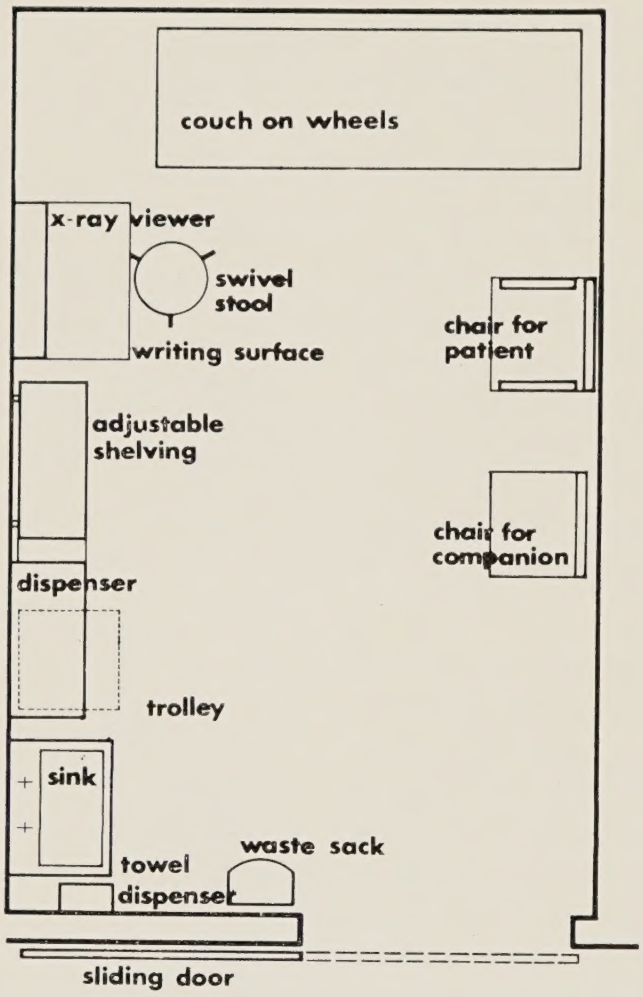
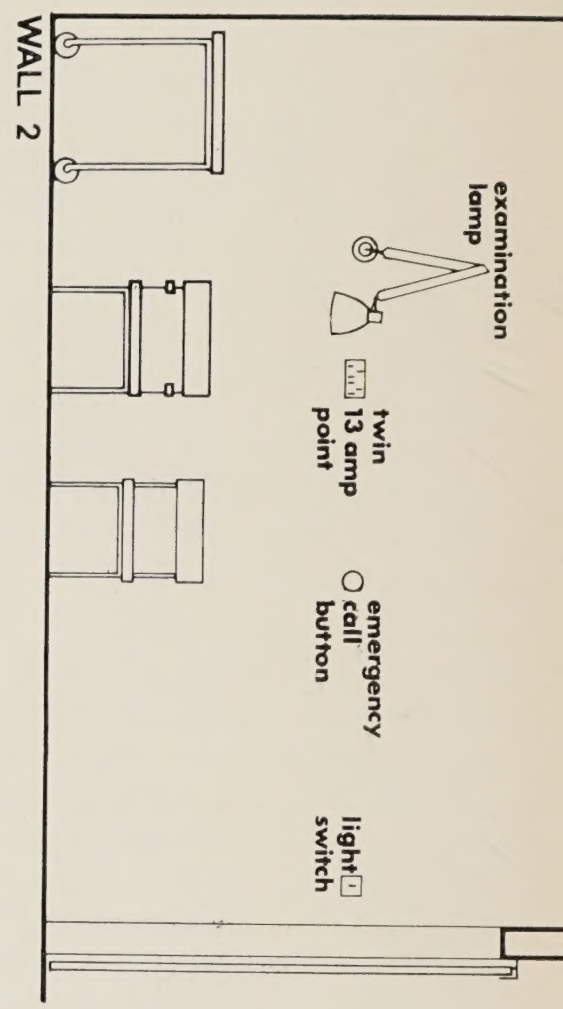
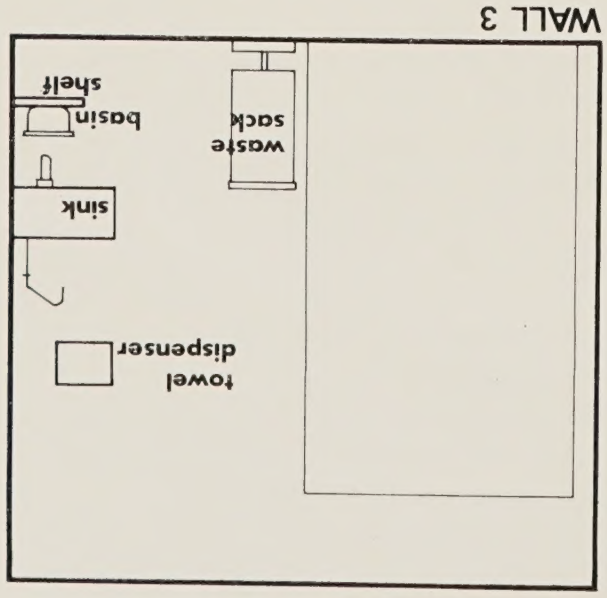


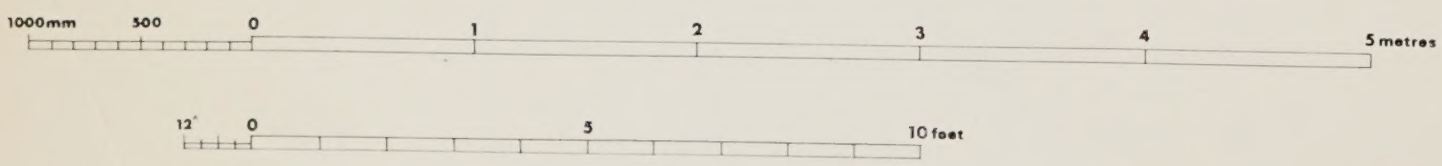


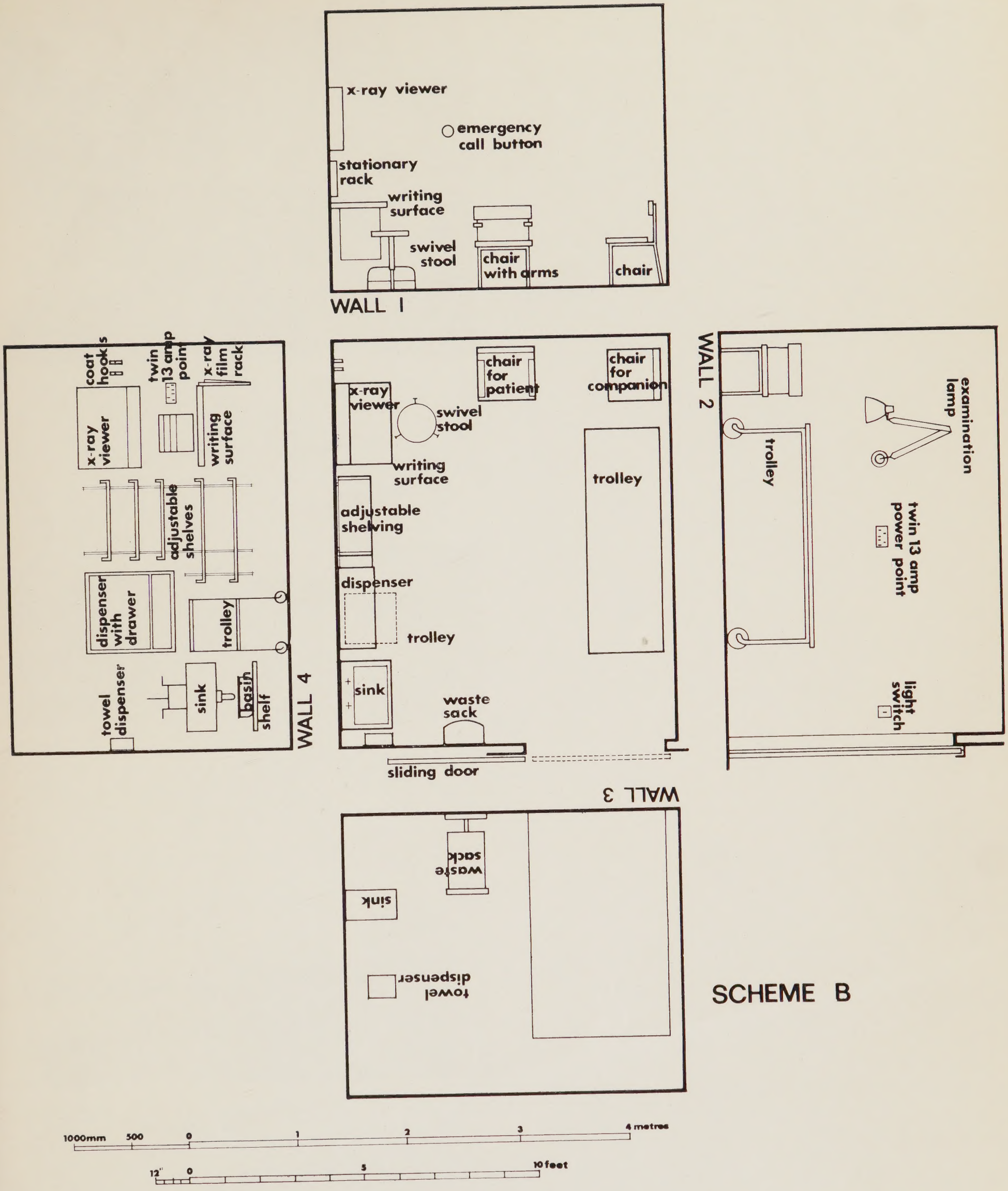
WALL 2



WALL 3

SCHEME A




WALL 1
x-ray viewer
emergency call button
stationary rack
writing surface
swivel stool
chair with arms
chair
WALL 2
examination lamp
trolley
twin 13 amp power point
light switch
WALL 3
x-ray viewer
swivel stool
chair for patient
chair for companion
writing surface
trolley
adjustable shelving
dispenser
trolley
sink
waste sack
sliding door
WALL 4
coat hooks
twin 13 amp point
x-ray film rack
x-ray viewer
writing surface
adjustable shelves
dispenser with drawer
trolley
towel dispenser
sink
basin
shelf
waste sack
sink
towel dispenser
1000mm
500
0
1
2
3
4 metres
12"
0
5
10 feet

SCHEME B

Equipment List

Group	*Item*	*No.*	*Length mm. ins.*	*Width mm. ins.*	*Height mm. ins.*	*Comment*
1	Shelves*	3	700 (28)	300 (12)		All shelves should be adjustable with end pieces. Vertical divisions along each shelf may be useful.
		2	900 (36)	300 (12)		Heights between shelves will vary to contend with the continuous changes in package sizing.
	Dispenser*	1	700 (28)	300 (12)	800 (31)	With adjustable vertical divisions and a drawer.
	Sink with wrist operated mixer taps	1	600 (24)	450 (18)	250 (10)	This sink is large enough to fill bowls and jugs.
	Writing surface	1	700 (28)	500 (20)		Fixed at sitting height.
	X-Ray viewer	1				Double viewer.
	Examination lamp	1				The type will vary according to requirements.
	Coat hooks	2				One hook for the doctor, one for the patient.
	Emergency call system	1				Staff/Staff call.
	Socket outlet	1	twin			By writing surface for dictating equipment and X-Ray viewer.
		1	twin			On long wall for nursing or diagnostic equipment.
11a	Dispenser for paper towels	1				
	Stationery rack	1				
	X-Ray film rack	1				
11b	Disposal bin*	1				The size will depend upon the quantity of disposables used.
	Dressings trolley	1	450 (18)	450 (18)	870 (34)	
	Surgeon's stool	1				Adjustable
	Patient's trolley/couch on wheels	1				The type will vary depending upon the organisation of the trolley service.
	Mounting step	1				Optional (see above)
	Leg rest	1				Optional
	Patient's chair	1				With arms
	Companion's chair—optional	1				Without arms

All imperial measurements are natural equivalents of the metric units.

**The equipment selected is determined by the organisation of supply and disposal.*

Operational Policies

All patients will be seen in combined examination and treatment rooms except those in need of immediate resuscitation. Emergency admissions can be arranged within these rooms. Approximately 75 per cent of patients are treated by a nurse after seeing a doctor and it is envisaged that both consultation and treatment will take place within these rooms. Most supplies will be stored at the point of use so that the nurse can carry out the prescribed treatment without leaving the patient.

The recommendations on storage required in these rooms assume a frequent topping-up system of supply. In the preferred system of working, doctors will move between rooms to individual patients, thus ensuring auditory and visual privacy, speedy handling of patients and flexible organisation of the doctor's work. This arrangement is considered to offer clear advantages over consultation either in an open area or in consulting rooms with separate examination cubicles.

It is recognised that there are variations in established clinical practice, and while movement of doctor to patient is a prerequisite of the preferred system, the selection of any one combined examination and treatment room as a base for the doctor's activities is not precluded by the detailed design. Similarly, although the designation of individual rooms or groups of rooms for " septic " or " clean " procedures is not part of the preferred policy there is nothing in the detailed design to prevent this type of segregation.

Heating and Ventilation

If possible the room should be naturally ventilated and allow for an air change rate of 3 per hour the temperature should be maintained at 21°C (70°F) throughout the year. Where the room is situated internally, mechanical ventilation will have to be provided. The mechanical ventilation system should allow for six air changes per hour by means of a heated filtered fresh air supply and extract. The rate of extract should be such that a slight positive pressure is maintained in relation to the external corridor. The room temperature should be maintained at 21°C (70°F) as in the case of natural ventilation.

Lighting

Artificial lighting to give a general illumination value of 215 lux (20 lumens sq. ft.) at 1.00 m. above floor level should be provided. In addition to the general lighting a wall or ceiling mounted spot/examination lamp is required, this being of a type which can be adjusted so that when not in use does not constitute an obstruction to persons working in the room. The provision of natural lighting must be consistent with maintaining privacy.

Socket Outlets

Two twin 13 amp. power points are required, one pair for the X-Ray viewer and dictating equipment, the other pair for nursing or diagnostic equipment.

Piped Medical Gases and Suction

There are no piped gases; portable cylinders and equipment will be available for use in an emergency.

Communications

For incoming and outgoing calls one telephone will serve a number of rooms; it is inappropriate to provide telephones for this purpose within examination and treatment rooms. A system whereby medical and nursing staff can call for aid is essential. With the growing use of the internal telephone system for transmitting cardiac arrest calls, the provision of a telephone of this type within each room should be considered as an alternative to a simple emergency call system.

Space Requirements

Space is required for people, equipment and the activities involved in:—

1. Consultation, examination and treatment of patients arriving on foot.
2. Consultation, examination and treatment of patients arriving in a wheelchair.
3. Consultation, examination and treatment of patients arriving on a trolley.

In a minority of cases it will be necessary for a patient arriving on foot or by wheelchair to lie on a flat surface for examination and/or treatment. In Scheme A a couch on wheels is provided for this purpose. Patients arriving on a trolley will remain on it during their stay and leave on the same trolley. These factors determine the total area 10.40 square metres (116 sq. ft.) and the length 4.00 metres (13 ft. 4 ins) and width 2.60 metres (8 ft. 8 ins.) of the room.

In Scheme B, where a trolley exchange system is operated, a trolley may be already in the room when a patient arrives and will serve instead of the couch on wheels provided in Scheme A. Should the patient arrive on a trolley this first trolley would require to be removed. Scheme B has a total area of 10.15 square metres (113 sq. ft.) length 3.50 metres (11 ft. 8 ins.) and width 2.90 metres (9 ft. 8 ins.)

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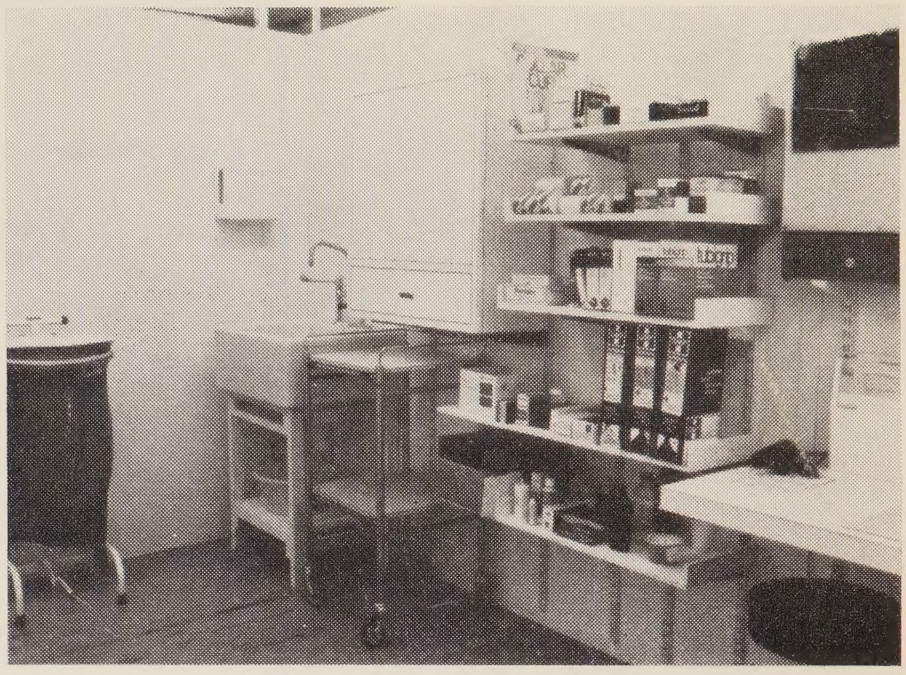
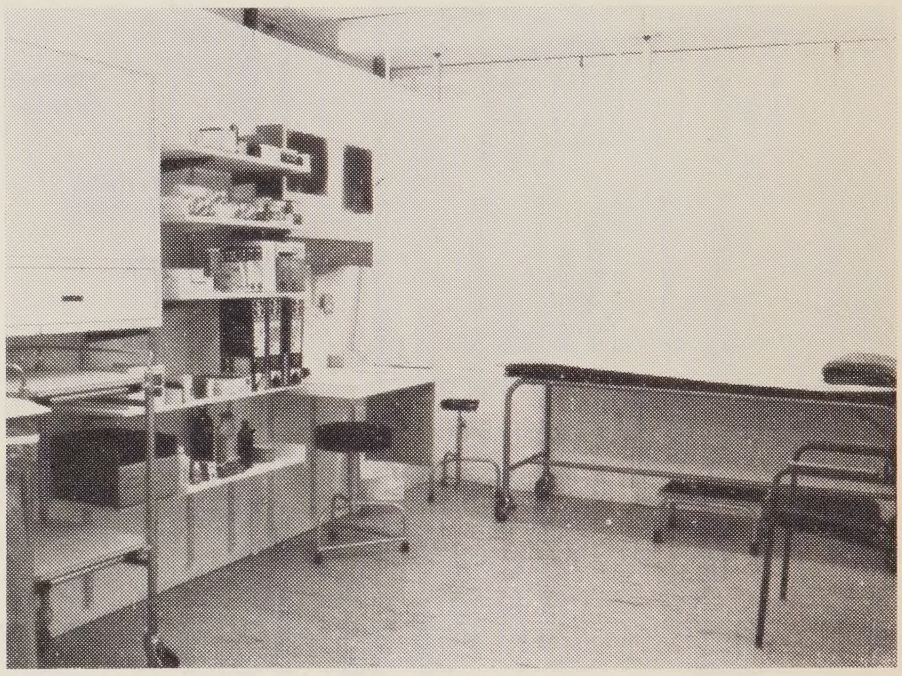
Acknowledgement

The Centre acknowledges the assistance given by manufacturers who supplied equipment used during this study. Specific items shown in the photographs are representative of the wide range of equipment available.

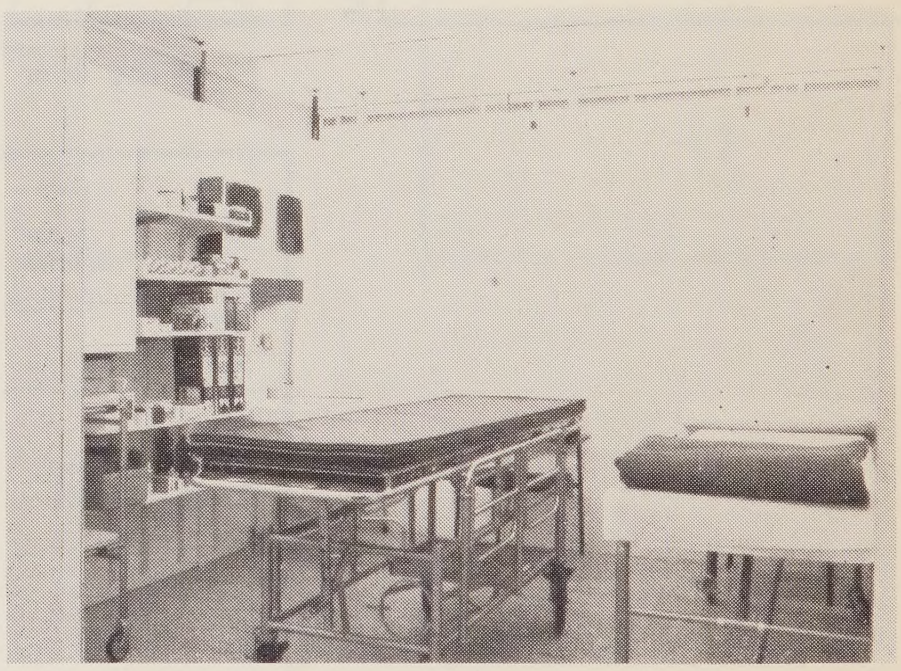
Schemes A and B—storage arrangements



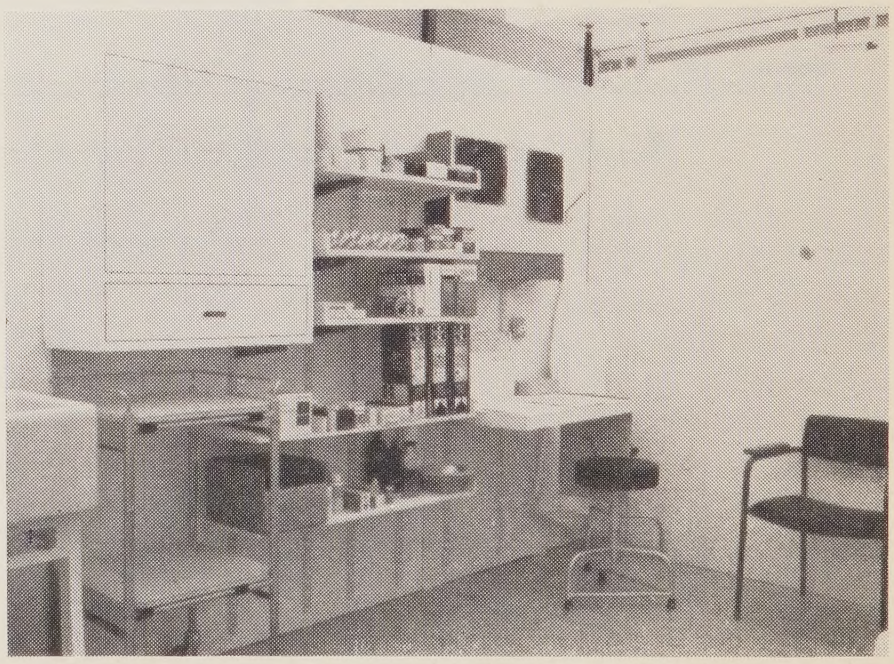
Scheme A—view from the door



Scheme B—view from the door during exchange of trolleys



Scheme B—looking towards writing surface and X-Ray viewer



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